

**DG-1500A**

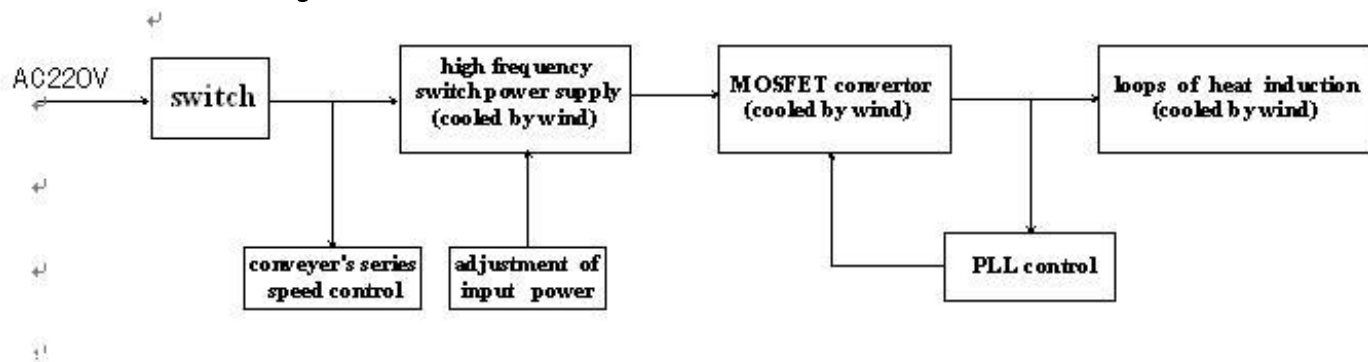
**AIR COOLED INDUCTION CAP SEALER**

**OPERATION  
MANUAL**

## I Summary

Compound material induction of sealing technology is world-widely regarded as an advanced way of sealing on packing. It is Increasingly adopted to seal and pack products in high quality, such as: medicines、 foods、 cosmetics、 pesticides、 chemical products and other bottled products. Continuum aluminum foil sealers of model DG-1500A are introduced updated technology of induction and heat control from Taiwan. We also adopt advanced high power mosfet module, technology of high frequency switch power supply and PLL & digital technology. We have made great progress on mini-type, high stability and high effect.

## II Theory



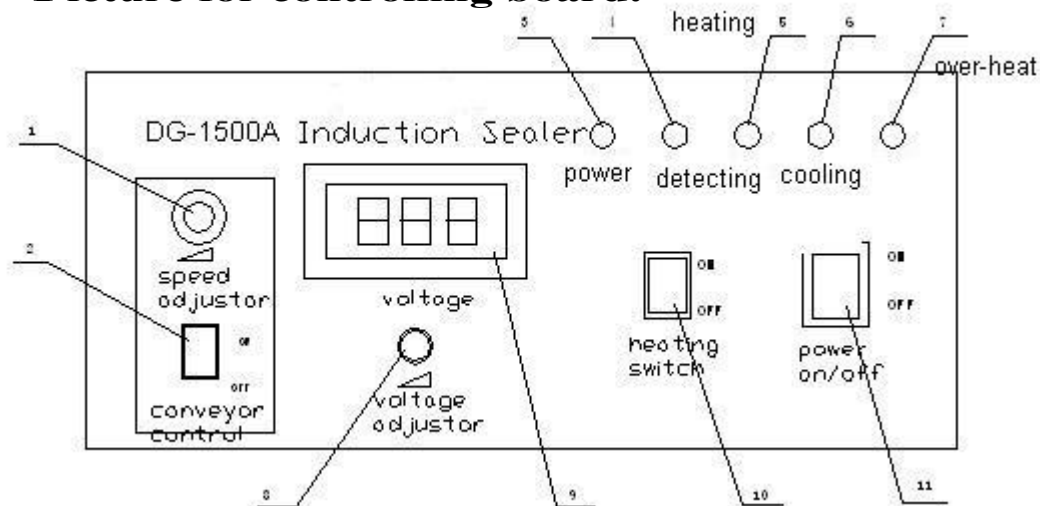
The working theory is based on the high frequency of magnetic field, which makes the foils engender immense whirlpool and be heated quickly. The agglutinate membranes under the foils are melted, which makes the foils conglutinated to the bottles' to achieve the goal of airproof sealing rapidly and untouchedly.

The main power units are induction utensil of heating are placed above a big radiator. They are cooled forcedly by wind. The conveyer adopts stepless-speed adjustor.

### III Main parameter:

1. Power supply:  $\sim 220V \pm 10\%$ , 50/60Hz
2. Current supply: static state  $\leq 4A$ , dynamic state  $\leq 10A$
3. Output power: ( adjustable ), 2KWmax
4. Output wave: sine wave, 60~80KHz
5. Rind protection grade: IP21
6. Sealing speed: 150-200 bottles per minute (Closure dia.  $\varnothing 34mm$ , bottle body  $\varnothing 40mm$ . Please use the bottles made from polyethylene as a test.)
7. Induction head's sealing diameters:
  - ① Generation I type (Two Selecting Range)  $20mm \leq \varnothing \leq 80mm$ . (First selector:  $\varnothing 20mm - \varnothing 40mm$ ; Second selector:  $\varnothing 40mm - \varnothing 80mm$ ) ;
  - ② Large Type:  $\varnothing 70mm - \varnothing 110mm$
  - ③ Custom Type:  $\varnothing$  mm -  $\varnothing$  mm

### IV Picture for controlling board:



- 1, Conveyor speed adjustor: Speed is changed through the potentiometer.
- 2, Conveyor Switch
- 3, Power indicator: It's on when the power connected.
- 4, Detecting indicator: It's on when the faults happened and alarm sounded, the sealer will stop heating any more.
- 5, Heating Indicator: Turn on heating switch, it flashes

which means the sealer is going to heat status, it's able to work.

**6, Cooling indicator: It's on when working.**

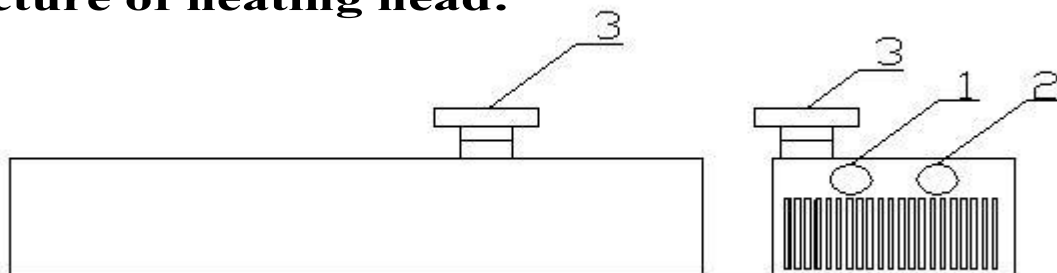
**7, Over-heat indicator: It's off when working; it's on with sounded alarm which means the sealer is over heat and it will going to stop for self-protection.**

**8, Voltage Adjustor: Voltage output high means power output high; Voltage output low means power output low**

**9, Voltage indicator**

**10: Heating Switch: The heating indicator light flashes when turn on, the sealing is going to heating status; Turn off, the heating indicator off and the sealer stop heating.**

#### **V Picture of heating head:**

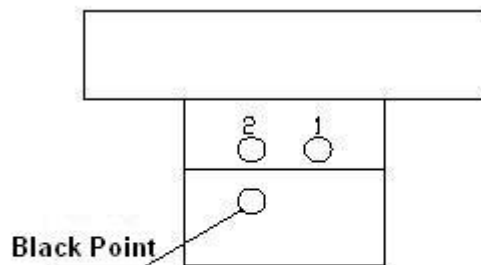


- 1: line of power output    2: line of power output control**  
**3, Sealing diameter tap selector switch**

#### **VI Notices for installation and usage:**

- 1. Acreages of loops both of power supply wire and of ground connection wire are  $> 1.5\text{mm}^2$  . It must add an AC automatic manostat if the voltage power supply is unstable and affects the machine's formal working.**
- 2. The machine must be reposefully installed in a dry, clean, no dust, nor corrosive gas, ventilation environment and far away from radiations and heat sources.**
- 3. Tap selector switch (General I type get this function): See pic.1, take a instance: If the operator would like to setup  $\varnothing 20$ -  $\varnothing 40\text{mm}$ , please twist the point "1" aim to**

the black point until head “Da” sound, that’s ok; If setup  $\varnothing$  40-  $\varnothing$  80mm, please twist the point “2” aim to the black point until head “Da” sound.



**PIC.1**

4. Adjusting the induction head’s height according to different containers’ heights. The gap between the induction head and closure should less than 2.5mm (Sealing diameter  $\varnothing$  20-  $\varnothing$  40mm), in general, sealing effect is more higher following gap be shorter.

When the sealing diameter larger than 40mm, please turn to the large selector switch, and decrease the output voltage properly or distance the gap between closure and induction head to be higher (at least 4mm), in order to improve the sealing effect and equipment’s load safe characteristic.

5, Operation steps in detail: The lights of work and power will be on if the switch of power supply is pointing to “on”, which means the power supply and circuitry are normal; the heating switch is pointing to “on”, which means the main system is on the state of heating. After setting up the voltage adjustor then adjust the speed of the conveyer according to necessity.

Screw on the closure with induction seals inside and put the bottles on the conveyer, then adjust the guide baffle to keep the bottles’ center line is consistent to the heating head’s. The bottles in the conveyer will be sealed automatically after they pass through the heating head. It is better to have an operation test to achieve the best

**working state, finding out the best operation parameter and recording it. Finished the adjustment, the machine can not be changed by layman by mistake during the normal working state.**

- 6. The main machine and induction head will generate heat when on working, so it should remain the entrance of wind to be clean and free flowing.**
- 7. The dustband at the right side of main body of the sealer must be cleaned periodically (Screw off the four tapping screws, we recommendation every two months. It's also basing on the circumstances around the machine).**
- 8, The induction head to be power output part of the induction sealer which is setup to meeting with inside circuit, accordingly, please do not disassembly by curiously, otherwise, it might affect the work power output efficiency, even burnt the electric elements inside.**
- 9, The inductor coil will generate large amount of current on working, which is forbid the operator the separate the induction head with main machine. Otherwise, the electric elements are easily burnt to damage the sealer.**
- 10, Do not seal the bottles with materials which easily to be fired or bombed!**

## VII troubleshooting:

<b>Trouble</b>	<b>Cause</b>	<b>Solution</b>
<b>E01</b>	The input voltage is too low	Ensure that the machine is used at rated voltage
<b>E02</b>	The control line of the Heating sensor disengagement	Check the heating sensor connection
<b>E03</b>	The power tube overheating	Improve the main chassis ventilation environment
<b>E04</b>	Overload	Appropriate increase the distance of the heating sensor from the bottle
<b>E05</b>	Heating sensor disengagement	Check the heating sensor connection
<b>E06</b>	Overcurrent or other faults	Please refer to items 3 and 5 above
<b>One side of the bottle not well sealed</b>	The centerline of the bottle is inconsistent with the centerline of the heating sensor	Adjust the Center Control system of the conveyor belt so that the centerline of the bottle is aligned with the centerline of the heated sensor head
<b>Some bottles are not well sealed</b>	The cap is not tightened, causing the aluminum foil inside the cap can not full contact with the bottle	Try to make sure the aluminum foil inside the bottle cap full contact with the bottle
	The speed of the conveyor belt is too fast or the output voltage is too low , causing the sealing power is insufficient	Appropriate to reduce the speed of the conveyor belt